

S/141/62/005/006/011/023  
E192/E382

9,1000

AUTHOR: Zhidko, Yu.M.

TITLE: Antenna arrays with the spacings between the radiators increasing in accordance with an arithmetic progression

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy,  
Radiofizika, v. 5, no. 6, 1962, 1144 - 1150

TEXT: The possibility of suppressing interference maxima in an antenna array with varying spacings between the radiators is investigated analytically. The spacings  $d_i$  between the radiators vary in accordance with the arithmetic progression:

$$d_i = d_1 \left[ 1 + (i - 1) \frac{\frac{n}{M} - 1}{\frac{N}{M} - 1} \right]$$

where

$$i = 1, 2, \dots, N; \quad N = 2M; \quad \frac{n}{M} = d_M/d_1.$$

The directional patterns of such arrays were calculated as a function of the parameter  $\xi = kd_o \sin \theta$ , where  $d_o = L/(N - 1)$ ,  
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E192/E382

Antenna arrays . . . .

which is the average distance between the radiators, and  $\theta$  is the angle read from the direction perpendicular to the axis of the antenna.  $N$  is the number of radiators and  $L$  is the length of the antenna. The patterns were calculated for various values of  $\kappa$  and  $N$ . It was found that with increasing  $\kappa$  the level of the side lobes for  $\zeta$  lying between -22 and +22 gradually decreased, reaching a maximum at  $\kappa = 1.0$  and then increased; this is shown in Fig. 1. The dependence of the maximum level of the side lobes on  $N$  was also calculated and it was found that at  $N = 61$  the side lobes did not exceed -10 db and at  $N = 161$  all the side lobes were below -12 db. Apart from the absence of pronounced side lobes arrays with non-equidistantly spaced radiators were also advantageous in that their directivity changed but little during rotation of the beam. Secondly, the directivity was made less dependent on frequency. The spacing of the radiators in accordance with arithmetic progression did not yield optimum conditions since the directional pattern of an optimum array should contain  $N$  identical side lobes. However, for  $\kappa = 1.8$  the patterns of such arrays had a very large number of equal side lobes for sufficiently large  $N$

Card 2/3

ZHIDKO, V. I.

"Investigation of heat and mass transfer in the drying of grain in a compact movable bed."

report submitted for 2nd All-Union Conf on Heat & Mass Transfer, Minsk,  
4-12 May 1964.

Odessa Technological Inst.

ZHIDKO, V. I.

"Investigating the Progressive Drying Ranges of Stored Wheat," Cand Tech Sci,  
Odessa Technological Inst, Odessa, 1953. (FZhKhim, № 23, Dec 54)

Survey of Scientific and Technical Dissertations Defended at USSR Higher  
Educational Institutions (12)  
SO: Sum. No. 556, 24 Jun 55

ZHIDKO, V., kandidat tekhnicheskikh nauk; PLATONOV, P., kandidat tekhnicheskikh nauk

Capacity of grain dryers as affected by the initial moisture content  
of grain. Muk.-elev.prom.21 no.9:5-7 3 '55. (MIEA 8:12)

1. Odesskiy tekhnologicheskiy institut imeni I.V.Stalina  
(Grain--Drying)

ZHIDKO, V.I.

Permissible temperatures of the heating of wheat during its  
drying in a fluidized bed. Izv.vys.ucheb.zav.; pishch.tekh.  
no.3:157-162 '59. (MIRA 12:12)

1. Odesskiy tekhnologicheskiy institut imeni I.V.Stalina.  
Kafedra elevatorno-skladskogo khozyaystva.  
(Wheat--Drying)

GORBIS, Z.R.; ZHIDKO, V.I.; ZELINSKIY, G.S.

Studying the aerodynamics of grain in a fluidized bed. Izv.  
vys.ucheb.zav.; pishch.tekh. no.2:110-115 '59. (MIRA 12:8)

1. Odesskiy tekhnologicheskiy institut im. I.V.Stalina.  
(Grain) (Fluidization)

GORBIS, Z., kand.tekhn.nauk; ZHIDKO, V., kand.tekhn.nauk.

Controlling the temperature of grain in column type grain dryers.  
Muk.-elev.prom.23 no.8:10-13 Ag '57. (MIRA 10:11)

1. Odeskiy tekhnologicheskiy institut im. I.V.Stalina.  
(Grain--Drying) (Thermostat)

1. ZHIDKO, Ye. P.

2. USSR (600)

4. Hops

7. Vegetative crossing of hops and hemp. Agrobiologija no. 6 1952.

9. Monthly List of Russian Accessions, Library of Congress, April 1953, Uncl.

ZHIDKO, Ye.P.

Pollination of hops. Trudy VNIIPP no.5: 21-23 '55. (MLRA 9:1)

(Hops) (Fertilization of plants)

ZHIDKO, Ye.P.

Inheritance of characteristics and qualities in hops. Trudy VNIIIPP  
no.5: 34-39 '55. (MLRA 9:1)

(Hops)

ZHIDKO, Ye. P.

ZHIDKO, Ye. P. "Intraspecific Hybridization in Developing Types of Hops."  
Min Higher Education USSR. Ukrainian Order of Labor Red  
Banner Agricultural Academy. Zhitomir, 1956  
(For the Degree of Candidate in Agricultural Science)

So: Knizhnaya Letopis' No. 18, 1956

7,1000

S/141/62/005/006/011/023  
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AUTHOR: Zhidko, Yu.M.

TITLE: Antenna arrays with the spacings between the radiators increasing in accordance with an arithmetic progression

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy,  
Radiofizika, v. 5, no. 6, 1962, 1144 - 1150

TEXT: The possibility of suppressing interference maxima in an antenna array with varying spacings between the radiators is investigated analytically. The spacings  $d_i$  between the radiators vary in accordance with the arithmetic progression:

$$d_i = d_1 \left[ 1 + (i - 1) \frac{n - 1}{N - 1} \right]$$

where

$$i = 1, 2, \dots, N; \quad N = 2M; \quad n = d_N/d_1.$$

The directional patterns of such arrays were calculated as a function of the parameter  $\zeta = kd_o \sin \theta$ , where  $d_o = L/(N - 1)$ ,  
Card 1/3

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S 1/11/62/005/006/011/023  
E192/E382

Antenna arrays ...  
which is the average distance between the radiators, and  $\theta$  is the angle read from the direction perpendicular to the axis of the antenna.  $N$  is the number of radiators and  $L$  is the length of the antenna. It was found that with increasing  $N$  the values of the side lobes for  $\theta$  lying between -22 and +22 gradually decreased, reaching a maximum at  $\theta = 1.8$  and then increased; this is shown in Fig. 1. The dependence of the maximum level of the side lobes did not exceed -12 db. Apart from the absence of pronounced side lobes with non-equidistant spacing, all the side lobes were below -12 db. Secondly, the directivity changed but little during rotation on frequency. The spacing of the radiators in accordance with arithmetic progression did not yield optimum conditions since the directional pattern of an optimum array should contain  $N$  identical side lobes. However, for  $\kappa = 1.8$  the patterns of such arrays had a very large number of equal side lobes for sufficiently large  $N$ .  
Card 2/3 ✓

AVERBAKH, V.S.; ZHIDKO, Yu.M.

Reciprocal ferrite switch using a slot bridge. Izv. vys. ucheb.  
zav.; radiotekh. 6 no.3:259-264 My-Je '63. (MIRA 16:9)

1. Rekomendovana Nauchno-issledovatel'skim radiofizicheskim  
institutom pri Gor'kovskom gosudarstvennom universitete imeni  
Lobachevskogo.

(Electric switchgear)

TOPIC TAGS: antenna, optimum antenna linear antenna

SEARCHED INDEXED  
SUBMITTED 10 Dec 52  
SUB CODE CO  
Card 1/1

DATE 10 Dec 52  
NO REF Sov: 902

FILED (X)  
CITEP (X)

"APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R002064720019-0

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APPROVED FOR RELEASE: 03/15/2001

CIA-RDP86-00513R002064720019-0"

ACCESSION NR: AP4042527

S/0109/64/009/007/1304/1308

AUTHOR: Zhidko, Yu. M.

TITLE: Optimum antenna arrays for determining the angular coordinate of a target

SOURCE: Radiotekhnika i elektronika, v. 9, no. 7, 1964, 1304-1308

TOPIC TAGS: radar, radar antenna, antenna array, target coordinate determination

ABSTRACT: Based on L. E. Brennan's work, formulas which describe the case of two linear antenna arrays with their separate amplifiers are developed. Sum and difference signals  $A = A_1 + A_2$  (where  $A$  is the amplifier output-signal amplitude) are formed. The exact target position is determined from the ratio of the difference signal to the sum signal. Assumptions: antenna noise is neglected; amplifier noise is distributed according to the normal law; the signal-to-noise

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ACCESSION NR: AP4042527

ratio in the amplifier is considerably greater than 1. Orig. art. has: 2 figures and 19 formulas.

ASSOCIATION: none

SUBMITTED: 03Jun63

ATD PRESS: 3069

ENCL: 00

SUB CODE: DC

NO REF SOV: 001

OTHER: 000

Card 2/2

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APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R002064720019-0"

ZHIDKOV

Use of "Sadkin" asphalt instead of resin in varnish No. 350. Zhidkov. *Byull. (Krem' Upr.). Lekal'nost' i khim. Prom.*, 1939, No. 6-7, 28.—Substitution of resin by "Sadkin" asphalt in varnish No. 350 increased the hardness and gloss of the film. David Acton

David Anthony

## A.I.D.-S.L.A. METALLURGICAL LITERATURE CLASSIFICATION

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APPROVED FOR RELEASE: 03/15/2001

CIA-RDP86-00513R002064720019-0"

ZHIDKOV, A.

We are using industrial building methods. Sel'stroi.  
15 no.8:3 Ag '60. (MIRA 13:8)

1. Glavnyy inzhener tresta "Stavropol'sel'stroy".  
(Stavropol' Territory—Precast concrete construction)

ZHIDKOV, A

Preparing alcohols and acids from waste water of sugar manufacture. A. Zhukov, Yu. Zhitovlyanski and B. Tsvet, neutralized with  $\text{Ca}(\text{OH})_2$ , The water is in an autoclave. The vapors discharged heated to 140° $^{\circ}\text{C}$  of  $\text{CH}_3\text{OH}$ , while from a rectifying column the water  $\text{H}_2\text{SO}_4$   $\text{AcOH}$  is distd. off at atm. pressure and lactic acid in vacuo.

**ASA-SLA METALLURGICAL LITERATURE CLASSIFICATION**

APPROVED FOR RELEASE: 03/15/2001

CIA-RDP86-00513R002064720019-0"

"APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R002064720019-0

ZHIDKOV, A.A.

APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R002064720019-0"

BORZENKO, G.M., inzh.; ZHIDKOV, A.A., inzh.; TIMOFEYEVA, V.I., inzh.

Automatic controllers of the EAUS-u electronic system.  
Teploenergetika 10 no.6:81-86 Je '63. (MIRA 16:7)

1. Vsesoyuznyy teplotekhnicheskiy institut.  
(Electric controllers) (Automatic control)

YAPASKURT, V.V.; YEPISHIN, A.S.; SHAKIN, A.N.; SILIN, P.M.; ZHIDKOV, A.A.;  
KHELEMSKIY, M.Z.; SHEMYAKIN, P.N.; NOVIKOV, V.A.; POPOV, V.D.; HENIN,  
G.S.; NAYDENOV, A.K.; KURBATOVA, V.S.; KARTASHOV, A.K.; YARMOLINSKIY,  
A.K.; ZIBOROV, D.K.; VAYSMAN, M.L.; ZAMYROVSKIY, V.A.; SVYATENKO, M.M.

IULii Markovich Zhvirblianskiy; obituary. Sakh.prom.29 no.6:48 '55.  
(Zhvirblianskiy, IULii Markovich, 1894-1955) (MIRA 9:1)

"APPROVED FOR RELEASE: 03/15/2001

CIA-RDP86-00513R002064720019-0

PARSHIKOV, M.Ya.; MAKHINYA, M.M.; SILIN, P.M.; YAPASKURT, V.V.; YEPISHIN, A.S.;  
SHAKIN, A.N.; ZHIDKOV, A.A.; KHELEMSKIY, M.Z.; KARTASHOV, A.K.; BEVIN, G.S.  
LEPESHKIN, I.P.; KHASNYUK, G.M.; ZHVIRKO, I.S.; ZELIKMAN, I.F.; KHBYZE, H.V.

Birthday of P.V.Golovin. Sakh.prom.29 no.5:7 '55. (MLRA 8:11)  
(Golovin, Pavel Vasil'evich, 1880-)

APPROVED FOR RELEASE: 03/15/2001

CIA-RDP86-00513R002064720019-0"

ZHILKOV, A.A., kandidat tekhnicheskikh nauk; VOLOKHVYANSKIY, V.M.,  
kandidat tekhnicheskikh nauk; ZDANOVICH, I.L., nauchnyy sotrudnik;  
UVAROVA, A.P., khimik-analitik; PATUSHINSKAYA, A.A., inzhener.

Lowering the losses of sugar in raffinade production. Trudy TSIMS  
no.4:180-193 '56.

(Sugar)

ZOTOV, V.P.; MAKHINYA, M.M.; PARSHIKOV, M.Ya.; GAVRILOV, A.N.; SILIN, P.M.;  
GOLOVIN, P.V.; KHEYZE, N.V.; BUZANOV, I.F.; KHELENSKIY, M.Z.;  
YAPASKURT, V.V.; SHARKO, A.P.; SANOV, N.M.; LITVAK, I.M.; IVANOV,  
S.Z.; LEPESHKIN, I.P.; KLEYMAN, B.M.; YEPISHIN, A.S.; GOLUB, S.I.;  
GERASIMOV, S.I.; GEUBE, V.R.; PASHKOVSKIY, F.M.; LITVINOV, Ye.V.;  
BENIN, G.S.; IVANOV, P.Ya.; VINOGRADOV, N.V.; PONOMARENKO, A.P.;  
ZHIDKOV, A.A.; KOVAL', Ye.T.; KARTASHOV, A.K.; NOVIKOV, V.A.

Sixtieth birthday of A.N.Shakin, Director of the Central  
Scientific Research Institute of the Sugar Industry. Sakh.  
prom. 35 no.7:33 JI '61.

(MIRA 14:7)

(Shakin, Anatolii Nikitovich, 1901-)  
(Sugar industry)

"APPROVED FOR RELEASE: 03/15/2001

CIA-RDP86-00513R002064720019-0

DYURGEROV, N.G.; RYLOV, L.A.; ISHCHENKO, Yu.L.; TKACHENKO, V.A.;  
BARILOV, O.A.; ZHIDKOV, A.I.; GRIGOR'YEV, G.G.

Using GSR-9000 generators for submerged arc welding.  
Mashinostroitel' no.9:33 S '62. (MIRA 15:9)

APPROVED FOR RELEASE: 03/15/2001

CIA-RDP86-00513R002064720019-0"

DYURGEROV, N.G., inzh.; ISHCHENKO, Yu.L., inzh.; ZOLOTYKH, V.T., kand.  
tekhn.nauk; SAPOV, P.M., inzh.; GRIGOR'YEV, G.G., inzh.; ZHIDKOV,  
A.I., inzh.; BARILOV, O.A., inzh.

Multiples-operator automatic welding under flux without ballast  
rheostats. Svar. proizv. no.4:40 Ap '63. (MIRA 16:5)

1. Rostovskiy-na-Donu institut sel'skokhozyaystvennogo  
mashinostroyeniya (for Dyurgerov, Ishchenko). 2. Rostovskiy zavod  
sel'skokhozyaystvennogo mashinostroyeniya (for Sapov, Barilov,  
Grigor'yev, Zhidkov).

(Electric welding--Equipment and supplies)

ZHIDKOV, A.M.

When will these urgent problems be solved? Rech.transp. 14 no.4:  
31-32 Ap '58. (MLRA 9:8)

1. Shkiper-nastavnik Irtyshskogo parohodstva.  
(Cargo handling)

ZHIDIKOV, A.P.

Using the method of G.P.Kalinin and P.I.Miliukov for calculating the unsteady water flow in the daily balance of the lower reach of the Rybinsk Hydroelectric Power Station. Trudy TSIP no.96:85-126 '60. (MIRA 13:6)  
(Rybinsk Hydroelectric Power Station—Hydraulics)

LEVIN, A.G.; ZHIDIKOV, A.P.

Numerical prediction of water level in the Volga River below the  
Stalingrad Hydroelectric Station by the electrical analog method.  
Meteor. i gidrol. no.8:38-41 Ag '61. (MIRA 14:7)  
(Volga River--Hydrology) (Electronic analog computers)

ZHIDIKOV, A.P.; NECHAYEVA, N.S.; BUDYLEVA, O.K.

Forecasting water levels of the Volga and Kama Rivers below the  
Volga Hydroelectric Power Station (Lenin) and Kama Hydroelectric  
Power Station. Trudy TSIP no.117:41-61 '63. (MIRA 16:7)  
(Volga River—Hydrology) (Kama River—Hydrology)

ZHIDIKOV, A.P.

Calculating the unsteady flow of water in the afterbays of hydroelectric power stations by the G.P.Kalinin and P.I.Miliukov's method. Trudy TSIP no.99:68-79 '61. (MIRA 14:5)  
(Hydrology)

PUSHEK, B.S., kand. geogr. nauk; POPOV, I.V., kand. geogr. nauk; OBRAZTSOV, I.N., inzh.; FEDOROV, N.H., kand. tekhn. nauk; GRUSHEVSKIY, M.S., kand. tekhn. nauk; KRIVOSEHEY, B.Z., inzh.; POPOV, O.V., star. nauchnyy sotr.; PIKUSH, N.V., kand. tekhn. nauk; LEVIN, A.G., kand. tekhn. nauk; ZHIDIKOV, A.P., inzh.; GAVRILOV, A.M., kand. geogr. nauk; KONDRAT'YEV, N.I., kand. tekhn. nauk, red.; URYVAYEV, V.A., kand. tekhn. nauk, red.; SHATILINA, M.K., red.; SOLOVEYCHIK, A.A., tekhn. red.

[Investigation of unsteady flow of water in the Tvertsa and Oredezh Rivers] Issledovaniia neustanovivshegosia dvizhenija vody na rekakh Tvertse i Oredezh. Pod red. N.E.Kondrat'eva i V.I.Uryvaeva. Leningrad, Gidrometeor. izd-vo, 1961. 287 p. 6 charts (in pocket)

(MIRA 14:8)

1. Leningrad. Gosudarstvennyy gidrologicheskiy institut.  
(Tvertsa River—Hydrology) (Oredezh River—Hydrology)

ZHIDKOV, A.P.; LEVIN, A.G.; NECHAYEVA, N.S.

Special hydrometric observations in the after bays of hydroelectric power stations. Trudy TSIP no.113:112-144 '61. (MIRA 14:9)  
(Stream measurements) (Hydroelectric power stations)

ZHIDKOV, A.Ya.

Find of phosphorites in the Baikal complex in the Okunayka River  
(Northern Baikal Highland). Trudy VSEGEI 66:83-85 '61.  
(MIRA 15:4)  
(Okunayka Valley—Phosphorite)

ZHIDKOV, A. Ya.

Composite intrusion of syenites in the Synnyr massif of the  
Northern Baikal alkali province. Geol. i geofiz. no.9:29-40  
'62. (MIRA 15:10)

1. Vsesoyuznyy nauchno-issledovatel'skiy geologicheskiy institut,  
Leningrad.

(Northern Baikal Highland—Syenite)

ZHIDKOV, A.Ye., MIRKINA, S.L., GOLUBCHINA, M.N.

Absolute age of alkaline and nepheline syenites of the North  
Baikal Elevation. Dokl.AN SSSR 149 no.1:152-155 Mr '63.  
(MIRA 16:2)

1. Vsesoyuznyy nauchno-issledovatel'skiy geologicheskiy  
institut. Predstavлено академиком D.I.Shcherbakovym.  
(Baikal Lake region—Syenite)

ZHIDKOV, A.Ya.

The new Northern-Baikal alkaline province and some data on the  
nepheline content of its rocks. Dokl. AN SSSR 140 no.1:181-184  
(MIRA 14:9)  
S-0 '61.

1. Vsesoyuznyy nauchno-issledovatel'skiy geologicheskiy institut.  
Predstavлено академиком D.S.Korzhinskим.  
(Baikal Lake region--Nephelite)

ZHIDKOV, A.Ya.

Differentiated pluton of alkali rocks in the Northern Baikal  
Highland. Mat.VSEGEI no.32:119-125 '60. (MIRA 14:3)  
(Northern Baikal Highland—Rocks, Igneous)

ZHIDKOV, A.Ya.

Loparite in the Northern Baikal Highland. Zap.Vses.min.ob-va '90  
no.3:228-291 '61. (MIRA 14:10)

1. Vsesoyuznyy nauchno-issledovatel'skiy geologicheskiy institut  
(VSEGEI), Leningrad.  
(Northern Baikal Upland--Loparite)

20-118-4-49/61

AUTHORS: Salop, L. I., Golovenok, V. K., Zhidkov, A. Ya.  
Shalek, Ye. A.

TITLE: On the Age of the Last Geosyncline Folding in the Baykal  
Upland (O vozraste posledney geosinklinal'noy skladchatosti  
v Baykal'skom ngor'ye)

PERIODICAL: Doklady Akademii Nauk SSSR, 1958, Vol. 118, Nr 4, pp. 800-802  
(USSR)

ABSTRACT: There are various standpoints concerning the age of this period of folding since the layers in question already belong to the Meso-Cainozoicum and are scarcely dislocated (ref. 1-4). The investigations of the authors on the edge of the upland in question have confirmed the opinion that the last stage of the geosyncline development took place at the boundary between middle-and upper-Cambrian. It is completely justified to speak of a Pribaykal'skiy front flexure from upper Cambrian in which strangely colored red molasse sediments (molassovyye) were accumulated. The formation of these masses had to take place simultaneously with great tectonic movements

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On the Ages of the Last Geosyncline Folding in the  
Baykal Upland

20-118-4-49/61

within the mentioned upland. These movements are dated by a discordance between <sup>Cm</sup><sub>1</sub> and <sup>Cm</sup><sub>3</sub>. However, the time of the fold formation has to be restricted to the interval between <sup>Cm</sup><sub>2</sub> and <sup>Cm</sup><sub>3</sub> if the geological data of the inner districts of the upland are taken into account where the middle Cambrian sediments take part in the fold formation together with the lower Cambrian. The tectonic phase was, however, obviously not so much limited with respect to time. Many researchers (ref.12) are of opinion that the age of the fold formation can be determined more precisely only according to the time of the formation of the conglomerates of the sole, and not according to the discordance. The sediments of the Verkholenskaya suite of the mentioned front flexure must be counted among such formations. This upper-Cambrian suite rests discordantly upon the carbonate mass of lower-Cambrian in the districts of the Siberian platform which border on the Baykal upland. This fact has served as basis for the above mentioned conclusion (ref.4) concerning the last stage of the geosyncline development of the upland between

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On the Age of the Last Geosyncline Folding in the  
Baykal Upland

20-118-4-49/61

middle- and upper - Cambrian. This folding apparently began after middle-Cambrian and was continued in upper-Cambrian. The low folding of the Verkholenskaya suite is a proof. The last stage of the movements is fixed by a great marine transgression. There are 12 Soviet references.

ASSOCIATION: All-Union Scientific Geological Research Institute  
(Vsesoyuznyy nauchno-issledovatel'skiy geologicheskiy  
institut)

PRESENTED: June 19, 1957, by A.A. Polkanov, Member AN SSSR

SUBMITTED: June 17, 1957

AVAILABLE: Library of Congress

Card 3/3

ZHIDKOV, A.Ya.

Unique deposit of pseudoleucite ultrapotassic syenite. Dokl.  
AN SSSR 152 no.2:414-417 S '63. (MIRA 16:11)

1. Vsesoyuznyy nauchno-issledovatel'skiy geologicheskiy institut.  
Predstavleno akademikom D.S. Korzhinskim.

SALOP, L.I.; GOLOVENOK, V.X.; ZHIDKOV, A.Ya.; SHALEX, Ye.A.

On the age of the last geosyncline folding in the Baikal Upland.  
Dokl. AN SSSR. 118 no.4:800-802 F '58. (MIRA 11:4)

1. Vsesoyuznyy nauchno-issledovatel'skiy geologicheskiy institut.  
Predstavleno akademikom A.A. Polkanovym.  
(Baikal region—Folds (Geology))

ATROSHCHENKO, V.I.; ZHIDKOV, B.A.; ZASORIN, A.P.

Small-scale experimental process of carbon monoxide conversion  
by water vapor. Kin. i kat. 3 no.4:605-609 Jl-Ag '62.

(MIRA 15:8)

1. Khar'kovskiy politekhnicheskiy institut imeni V.I.Lenina.  
(Carbon monoxide) (Water vapor) (Chemical models)

AUTHOR:

Zhidkov, G.V.

20-118-2-4/60

TITLE:

Boundary Properties of Differentiable and Harmonic Functions in Domains With Salient Points (Granichnyye svoystva differentsiruyemykh i garmonicheskikh funktsiy v oblastyakh s uglovymi tochkami)

SSSR

PERIODICAL: Doklady Akademii Nauk, 1958, Vol 118, Nr 2, pp 225-227 (USSR)

ABSTRACT: Let the domain  $G$  be generated by rotation of the radius  $r$  around the  $x$ -axis. On the boundary  $\Gamma$  of  $G$  let the function
$$\psi(\rho, \varphi) = \frac{1}{\sqrt{r}} f(\rho, \varphi), r = e^{\theta}$$
 be given. Let the harmonic

function  $V(\rho, \varphi, \theta)$  be constructed in  $G$ , where  $0 < \theta < \pi$ ,  $0 < \varphi < 2\pi$  denote spherical coordinates. Let  $D[V]$  be the Dirichlet integral of the function  $V(\rho, \varphi, \theta)$  in the coordinates  $\rho, \varphi$  and  $\theta$ .

Theorem: From

$$(1) \quad \iint_{\Gamma} |V|^2 d\Gamma \leq N \quad \text{for } \theta < \theta_0$$

and

$$(2) \quad D[V] < \infty$$

it follows the existence of a boundary function  $\psi(\rho, \varphi)$ 

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Boundary Properties of Differentiable and Harmonic Functions  
in Domains With Salient Points

summable in  $L_2$  for which

$$(3) \quad \lim_{\theta \rightarrow \theta_0} \iint_{\Gamma} |v - \varphi|^2 d\Gamma = 0$$

and

$$(4) \quad \iint_{\Gamma} |\psi(\xi + h_1, \varphi + h_2) - \psi(\xi - h_1, \varphi - h_2)|^2 d\Gamma \leq M \sum_{k=1}^{2\ell} h_k^{1+\epsilon}$$

Theorem: If a boundary function  $\psi(\xi, \varphi)$  summable in  $L_2$  satisfies (2), then the harmonic function corresponding to it possesses in  $G$  the following properties:  $v(\xi, \varphi, \theta)$  is harmonic in  $G$  for  $\theta < \theta_0$  and satisfies (1) and (3), while for  $D[v]$  it holds (2).

Theorem: If the right side of the inequality (4) is replaced by

$$M_1 \sum_{k=1}^{2\ell} h_k^{2\ell}, \text{ then it follows in } G:$$

$$\iint_G |v(\xi + h_1, \varphi + h_2, \theta + h_3) - v(\xi - h_1, \varphi - h_2, \theta - h_3)|^2 dG \leq M_2 \sum_{k=1}^{3\ell} h_k^{2\ell+1}$$

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Boundary Properties of Differentiable and Harmonic  
Functions in Domains With Salient Points

20-118-2-4/60

Two similar theorems are formulated for the case of the domain  $G_1 : 0 \leq x, y, z \leq \pi$ . There are 6 references, 2 of which are Soviet.

ASSOCIATION: Moskovskiy gosudarstvennyy universitet imeni M.V.Lomonosova  
(Moscow State University imeni M.V. Lomonosov)

PRESENTED: June 27, 1957, by S.L. Sobolev, Academician

SUBMITTED: June 25, 1957

AVAILABLE: Library of Congress

Card 3/3

"APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R002064720019-0

APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R002064720019-0"

ZHIDKOV, G.V.

Boundary properties of differentiable and harmonic functions in  
regions containing salient points. Dokl. AN SSSR 118 no.2:225-227  
Ja '58. (MIRA 11:4)

(Functional analysis)

ZHIDKOV, I.

In the vanguard of socialist competition. Obshchestv. pit.  
no. 1:38 Ja '61.  
(MIRA 14:1)

1. Starshiy inspektor gorodskogo upravleniya torgovli, Ryazan'.  
(Ryazan--Restaurants, lunchrooms, etc.)

ZHIDKOV, I.

A materiel base is created this way. Voen. znan. 39 no.11:19  
N '63. (MIRA 17:2)

1. Predsedatel' komitata Dobrovol'nogo obshchestva sodeyst-  
viya armii, aviatsii i flotu Gur'yevskogo neftopererabaty-  
vayushchego zavoda.

"APPROVED FOR RELEASE: 03/15/2001

CIA-RDP86-00513R002064720019-0

ZHIDKOV, I. (g.Vil'nyus)

Combined measuring device. Radio no.12:44-46 D '61. (MIRA 14:12)  
(Electronic measurements) (Oscillators, Electron-tube)

APPROVED FOR RELEASE: 03/15/2001

CIA-RDP86-00513R002064720019-0"

"APPROVED FOR RELEASE: 03/15/2001

CIA-RDP86-00513R002064720019-0

ZHIDKOV, K., polkovnik

Briefly about didactics. Starsh.-serzh. no.6:14 Je '62. (MIRA 15:7)  
(Educational psychology)

APPROVED FOR RELEASE: 03/15/2001

CIA-RDP86-00513R002064720019-0"

ZHIDKOV, K., polkovnik

Night vision instruments. Voen. znan. 40 no.1:12-13 Ja '64.  
(MIRA 17:4)

YAKOVLEV, I., general-major tankovykh voysk; ZHIDKOV, K., inzhener-

Train specialists of a high class. Voen.vest. 41 no.12:56-59  
D '61. (MRA 15:3)  
(Tanks (Military science))

LYAKHOV, S.M.; ZHIDKOV, L.F.

Bottom snare, an apparatus for studying the drift of benthic organisms in a river current. Zool. zhmr. 32 no.5:1020-1024 8-0 '53. (MLRA 6:10)

1. Kafedra obshchey biologii Kuybyshevskogo gosudarstvennogo meditsinskogo instituta i Zoologicheskiy institut Akademii nauk SSSR.  
(Fresh-water fauna)

STRIMBAN, Yu., inzh.-normirovshchik; ZHIDKOV, M.

Seven-hour workday at enterprises of the cereal products industry  
in Sverdlovsk Province. Muk.-elev. prom. 27 no.1:23-24 Ja '61.

(MIRA 14:1)

1. Sverdlovskoye upravleniye khleboproduktov (for Strimban).
2. Sverdlovskaya normativno-issledovatel'skaya stantsiya (for Zhidkov).

(Sverdlovsk Province—Hours of labor)  
(Sverdlovsk Province—Grain elevators)

ZHIDKOV, M.M.; FAYERSHTERN, Ya.D.

Automatic disconnection of alcohol conduits from alcohol storage  
cisterns. Soirt.prom. 20 no.4:34-35 '54. (MIRA 7:12)  
(Distilling industries) (Automatic control)

ZHIDKOV, M.M.

"Technology of liqueur and vodka production" by E.N. Bartenev,  
V.A. Smirnov. Reviewed by M.M. Zhidkov. Spirit. prom. 22 no.4:  
38-39 '56. (MLRA 10:2)

(Liquer industry) (Bartenev, E.N.) (Smirnov, V.A.)

PETROVSKIY, I.O.; VOVCHENKO, G.D.; SALISHCHEV, K.A.; SERGEYEV, E.M.;  
MOSKVITIN, V.V.; SHETENSKIY, L.V.; GEL'FOND, A.D.; OOLUBEV, V.V.;  
ALEKSANDROV, P.S.; SOBOLEV, S.L.; BAKHVALOV, S.B.; OGUBALOV, P.M.;  
KREYNES, M.A.; MYASNIKOV, P.V.; ZHIDKOV, M.P.; GAL'PERN, S.A.;  
ZHEGALKINA-SLUDSKAYA, M.A.

Vsevolod Aleksandrovich Kudriavtsev; obituary. Vest.Mosk.un. 8  
no.12:129 D '53. (MLRA 7:2)  
(Kudriavtsev, Vsevolod Aleksandrovich, 1885-1953)

ZHIDKOV, M.Ya.

Shortcomings of a useful book ("Dust prevention measures in mine sinking" by V.G. Il'enko, Revised by M.IA. Zhidkov). Berez, truda v prem. 1 no.2:37 F '57.  
(Mine dusts--Safety measures)  
(Il'enko, V.G.)

(MLRA 10t4)

ZHIDKOV, N.N., inzh.

Rinsing of PT-50-90/13 turbines. Energetik 12 no.10:10-11 0 '64.  
(MIRA 17:11)

ZHIDKOV, N.N., inzh.

Operation of AP-25-2, VT-25-5, VPT-25-3, and VK-25-1 turbines  
manufactured by the Leningrad Metalworking Plant with disconnection  
of the Main ejector. Energetik 12 no.3:10-11 Mr '64.

(MIRA 17:4)

"APPROVED FOR RELEASE: 03/15/2001

CIA-RDP86-00513R002064720019-0

ZHIDKOV, N.N., inzh.

Pipelines and flow controllers of deaerators. Elek. sta. 35  
no.2:84-85 F '64. (MIRA 17:6)

APPROVED FOR RELEASE: 03/15/2001

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APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R002064720019-0"

ZHIDKOV, N.P.

Certain properties of discrete dynamic systems. Uch.zap.Mosk.un.  
no.163:31-59 '52. (MIRA 8:5)  
(Topology)

BAKHALOV, S.V.; ZHIDKOV, N.P.; SAFROMOV, I.D.; LUPANOV, O.

Seventeenth mathematical olympiad for the schools of Moscow.  
Usp.mat.nauk. 10 incl:213-219 '55. (MIR 8:6)  
(Moscow--Mathematics)

HOUSEHOLDER, A.S.; ZHIDKOV, N.P. [translator]; SEROV, M.I. [translator];  
LYUSTERNIK, L.A., redaktor; KLIMENKO, S.V., tekhnicheskiy redaktor

[Principles of numerical analysis. Translated from the English]  
Osnovy chislennogo analiza. Perevod s angliiskogo N.P.Zhidkova i  
M.I.Serova. Pod red. L.A.Liusternika. Moskva, Izd-vo inostrannoi  
lit-ry, 1956. 320 p.  
(Numerical calculations)

ZHIDKOV, N. [P.]

Department of Mechanics and Mathematics. Vest.Mosk.un. 11  
no.6:149-152 Je '56.  
(Mathematics)

BAKHVALOV, S.V., ZHIDKOV, N.P.

The direct geodesic problem. Vest.Mosk.un.Ser.mat., mat., fiz.,khim. 12 no.2:15-23 '57.  
(MIRA 10:12)

1.Kafedra vychislitel'noy matematiki Moskovskogo universiteta.  
(Geodesy)

PHASE I BOOK EXPLOITATION SOV/3659

Berezin, Ivan Semenovich, and Nikolay Petrovich Zhidkov

Metody vychisleniy, t. 2 (Computational Methods, v. 2) Moscow, Fizmatgiz,  
1959. 620 p. 10,000 copies printed.

Eds.: B. M. Budak and A. D. Gorbunov; Tech. Ed.: N. Ya. Mirashova.

PURPOSE: This book is intended as a textbook for students in divisions of mechanics and mathematics and of physics and mathematics who are specializing in computational mathematics, and also for those interested in the theory and practice of numerical methods.

COVERAGE: The book is the second of two volumes. The authors analyze numerical methods of solving systems of linear algebraic equations, equations of higher degrees, and transcendental equations. They also discuss numerical methods for finding eigenvalues, approximate methods of solving ordinary differential equations, partial differential equations, and integral equations. No personalities are mentioned. References are given after each chapter.

Capd 1/15

ZHIDKOV, N.P.

PHASE I BOOK EXPLOITATION

SOV/3982

Berezin, Ivan Semovich, and Nikolay Petrovich Zhidkov

Metody vychisleniy, t. 1 (Calculation Methods, Vol. 1) Moscow, Fizmatgiz,  
1959. 464 p. 20,000 copies printed.

Eds.: B. M. Budak and A. D. Gordunov.

PURPOSE: This textbook is intended for students of mechanics and mathematics specializing in computational mathematics. It will be of interest to students of the theory and practice of numerical methods.

COVERAGE: This is the first of a 2-volume work based on courses given in the Department of Mechanics and Mathematics at Moscow State University. The book discusses operations with approximate numbers, the interpolation theory, numerical differentiation, numerical integration, and uniform and mean-square approximations of functions. The authors thank Academician S.L. Sobolev, Corresponding Member of the Academy of Sciences, USSR; Professor L. A. Lyusternik, Professor A. A. Lyapunov; Professor M. R. Shure-Bure; Docent A. D. Gorbunov; V. G. Kermanov; V. V. Rusanov; Yu. A. Shreyder; and

Card-1/7

**Calculation Methods, Vol. 1 (Cont.)**

SOV/3982

Assistant N. S. Bakhalov. The authors also thank Professor A. N. Tikhonov, Corresponding Member of the Academy of Sciences USSR, and Docent B.M. Budak. References accompany each chapter.

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Card 2/17

BEREZIN, Ivan Semenovich; ZHIDKOV, Nikolay Petrovich; TIKHONOV, A.N., prof.,  
retsgenzen; BUDAK, B.M., dotsent, retsgenzen; red.; GORBUNOV,  
A.D., red.; MURASHOVA, N.Ya., tekhn.red.

[Methods of calculations] Metody vychislenii. Moskva, Gos.isd-vo  
fiziko-matem.lit-ry. Vol.1. 1959. 464 p. Vol.2. 1959. 619 p.  
(MIRA 13:5)

1. Chlen-korrespondent Akademii nauk SSSR (for Tikhonov).  
(Electronic calculating machines) (Numerical calculation)

ZHIDKOV, N.P.; KORNEYCHUK, A.A.; KRYLOV, A.L.; MOSTINSKAYA, S.B.

Plane-parallel motion of a viscous liquid between two rotating cylinders. Vych. met. i prog. 1:152-166 '62. (MIRA 15:8)  
(Fluid dynamics)

BEREZIN, Ivan Semenovich; ZHIDKOV, Nikolay Petrovich; GORYACHAYA,  
M.M., red.; AKSEL'ROD, I.Sh., tekhn. red.

[Calculation methods] Metody vychislenii. Izd.2., perer.  
Moskva, Fizmatgiz. Vol.2. 1962. 635 p. (MIRA 15:11)  
(Numerical calculations)

ZHIDKOV, N.P.; DEZIN, A.A.; FEDORYUK, M.V.; KHOVANSKIY, G.S.

Reviews. Zhur. vych. mat. i mat. fiz. 5 no.4:781-784 J1-Aug '65.  
(MIRA 18:8)

ACC NR: AT6035243

SOURCE CODE: UR.3043/66/000/005/0146/0161

AUTHOR: Vedeneyev, Ye. P.; Zhidkov, N. P.

ORG: none

TITLE: Resonance solutions of a system of equations for dispersion amplitudes of charged Pi mesons at low values of parameter Gamma

SOURCE: Moscow. Universitet. Vychislitel'nyy tsentr. Sbornik. rabot, no. 5, 1966. Vychislitel'nyye metody i programmirovaniye (Computing methods and programming), 146-161

TOPIC TAGS: pi meson, resonance solution, equation system, charged particle

ABSTRACT: At low energies the real and imaginary parts of dispersion amplitude  $A_i(\omega)$  ( $i = 0, 1, 2$ ) of charged  $\pi$ -mesons satisfy a system of nonlinear singular integral equations which cannot be solved by known analytical methods. Therefore, it is very important to study the possibility of finding an approximate solution by numerical methods. Such a solution reduces to finding a good initial approximate solution and a rapidly converging iterative process which makes it possible to find an approximate solution to the system by some numerical method making use of the initial approximation. A method has been proposed for constructing limiting resonance solutions with power asymptotics when the resonance positions for each of the three amplitudes of  $A_i(\omega)$  coincide. Another so-called "N/D method" selects a partial set of parameters and gives approximate resonance solutions of the system; the initial approximations

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ACC NR: AT6035243

to the solution are taken from the previously mentioned method, but it must be noted that there may be an infinite number of solutions to  $A_1(\omega)$  if additional conditions are not imposed to ensure uniqueness of solution in this function class. This follows from the fact that the real and imaginary parts of the dispersion amplitudes are connected as stated above. The present article proves that to obtain a solution to this system when  $\gamma \rightarrow 0$  the sufficient condition on selection of parameters in the general case is that each of the three amplitudes of dispersion  $A_1(\omega)$  have a single resonance and that no two of them coincide. At low values of parameter  $\gamma$  this limiting solution may be a good initial approximation for calculating system solutions by iteration methods. Orig. art. has: 70 formulas and 4 figures.

SUB CODE: [12, 18] SUBM DATE: none/ ORIG REF: 003/ OTH REF: 001

Card 2/2

ACC-NR: A17009591

SOURCE CODE: UR/0020/66/170/005/1070/1072

AUTHOR: Shchedrin, B. M.; Belov, N. V. (Academician); Zhidkov, N. P.  
ORG: Moscow State University im. M. V. Lomonosov (Moskovskiy gosudarstvennyy  
universitet)

TITLE: Material point method in the structural analysis of crystals

SOURCE: AN SSSR. Doklady, v. 170, no. 5, 1966, 1070-1072

TOPIC TAGS: crystal structure analysis, x ray diffraction analysis

SUB CODE: 20

ABSTRACT: A method of "the material point" was developed for the structural analysis of crystals. In this method the totality of parameters to be defined by coordinates of an absolute minimum is assumed to correspond to coordinates of some material point that remains on a surface described by a selected function in an n-dimensional space. Under the action of a conditional gravity force, the material point is displaced and tends to get into regions of minimum potential energy. Mathematical expressions based on these concepts have been derived for calculations to be carried out in structural analysis. By applying the method described, authors determined the crystal structure of Ni-nitrodiethylenediamine chloride /Ni(CN2)NO2Cl/ on the basis of X-ray diffraction data. Orig. art. has: 6 formulas. [JPRS: 40,050]

Cord 1/1

UDC: 548  
0930 1.1.29

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is then developed for finding  $f(x)$  and  $\delta(x)$ . A numerical example has shown that if the segment in which the function is defined is broken up into 40 equal intervals, the approximation polynomial agrees with the exact one within  $\pm 10^{-4}$  percent. The authors thank A. V. Yeremenko for useful discussions.

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ZHIDKOV, N.P.

"Calculus and its applications." by P. Mainardi, H. Barkan.  
Reviewed by N.P. Zhidkov. Zhur. vych. mat. i mat. fiz. 4  
no. 5:974 S-O '64. (MIRA 17:12)

APPROVED FOR RELEASE: 03/15/2001

CIA-RDP86-00513R002064720019-0"

ZHIDKOV, N.P. (Moskva)

Some remarks concerning the conditionality of systems of linear  
algebraic equations. Zhur. vych. mat. i mat. fiz. 3 no.5:803-  
811 S-0 '63. (MIRA 16:11)

L 19410-63

EPA(b)/EWT(1)/BDS/ES(v) AEDC/AFFTC/ASD/AFMDC Pd-4/Pe-4  
ACCESSION NR: AR3005379 3/0044/63/000/006/B065/B055

SOURCE: RZh. Matematika, Abs. 6B292

AUTHOR: Zhidkov, N. P.; Korneychuk, A. A.; Krylov, A. L.; Mostinskaya, S. B.

TITLE: Plane-parallel motion of a viscous fluid between rotating cylinders

CITED SOURCE: Sb. rabot Vy'chisl. tsentra Mosk. un-ta, v. 1, 1962, 152-166

TOPIC TAGS: viscous fluid motion, Reynolds number, fluid, fluid motion

TRANSLATION: The authors describe in detail the numerical solution of the problem of non-stationary plane motion of a viscous non-compressible fluid between two co-axial rotating cylinders. The equation for the flow function was solved in polar coordinates. The initial field for the flow function had two point eddies. The choice of a difference scheme was based on the model equation  $u_t = \gamma u_{xx} + au_x$ .

The computation was carried out according to a three-layer scheme of the "cross" type by the method of matrix run-through on the "Strela" computer at the Computing Center of Moscow State University. As is noted in the article, the results of computation show that with increasing  $t$  the solution emerges into a certain stationary regime. With an increasing Reynolds number this emergence slow down and the

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L 19410-63

ACCESSION NR: AR3005379

smoothness of the solution experiences a stage of deterioration (turbulization of motion), after which there once again an improvement in the smoothness prior to emergence into a stationary regime. B. Rusanov.

DATE ACQ: 24Jul63

SUB CODE: MM

ENCL: 00

Card 2/2

GUROVICH, V.TS.; ZHEYENBAYEV, Zh.; ZHIDKOV, O.P.

Polarization of helium atoms by optical pumping and its determination from the varying intensity of light transmission. Izv. AN Kir. SSR. Ser. est. i tekhn. nauk 5 no.6:129-134 '63.

(MIRA 17:5)

ZHIDKOV, O.P.; PROVOTUROV, B.N.

Effect of modulation on the shape of magnetic resonance signals  
observed in a liquid. Opt. i spektr. 18 no.5:917-920 My '65.

(MIRA 18:10)

ZHIDKOV, P. F.

USSR/Metals - Cast Iron, Castings

May 51

"Centrifugal Casting of Cast-Iron Gears," A. D. Boguslavskiy, V. Ye. Gurkov, V. D. Dukkin,  
Engineers, P. F. Zhidkov

"Litey Proizvod" No 5, pp 9, 10

Describes 2-sided cantilever-type centrifugal casting machine and procedure for casting  
blanks of cast-iron gears. Advantages of centrifugal casting are discussed and improve-  
ment in metal structure, from viewpoint of graphite distribution and basic perlitic struc-  
ture, is illustrated by micrographs.

PA 195T57